



# **42 Kuala Lumpur \_Hackathon Asia 2024**

**22.3 million people**

Total Addressable Market (TAM)

**13.4 million people**

Serviceable Available Market (SAM)

**0.94 million people**

Serviceable Obtainable Market (SOM)

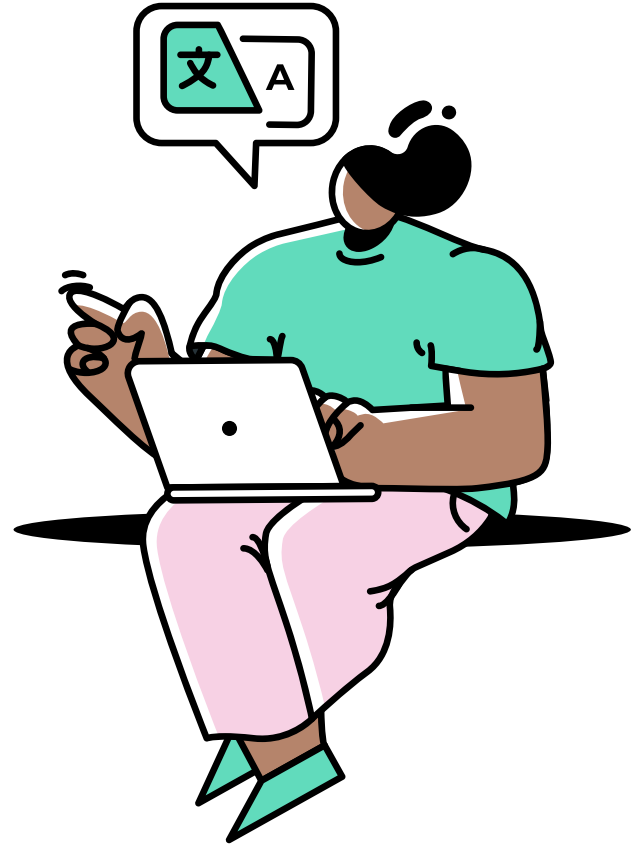


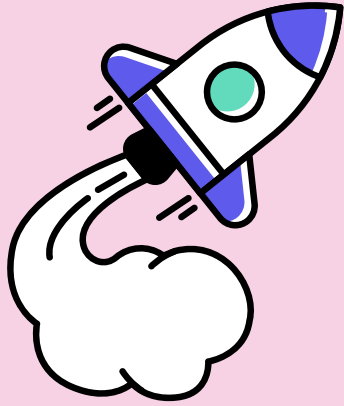
# RM 20 - 30

Average Spending per delivery

# RM 20 Million

Potential Revenue (after rounding up)

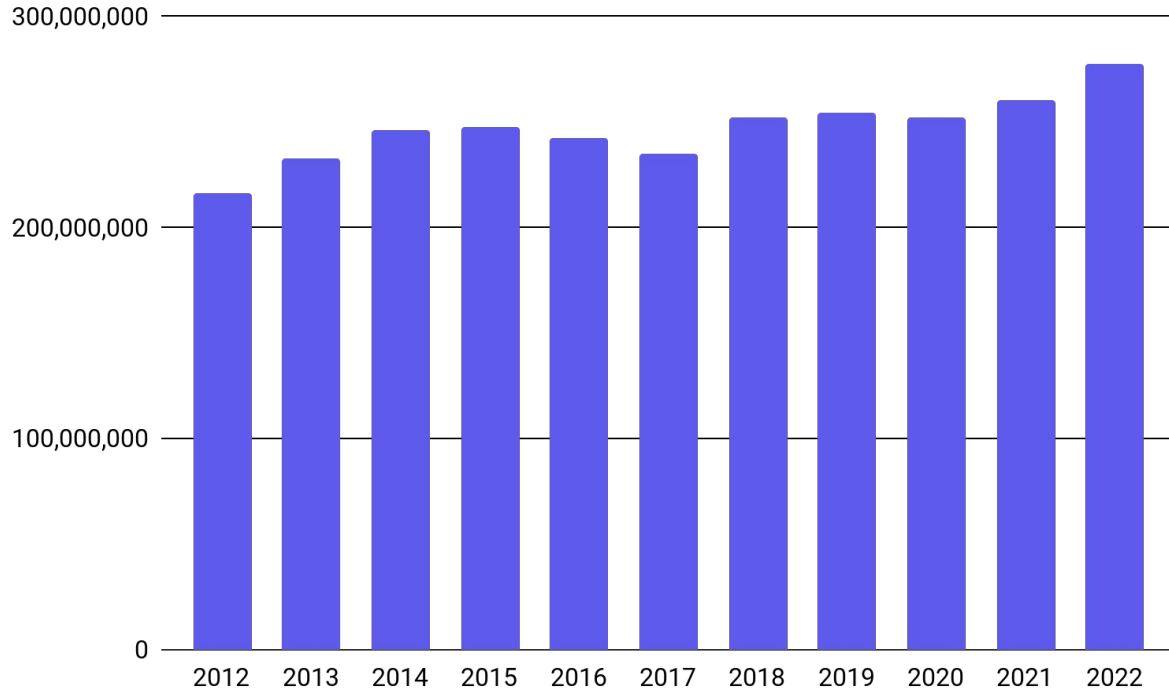


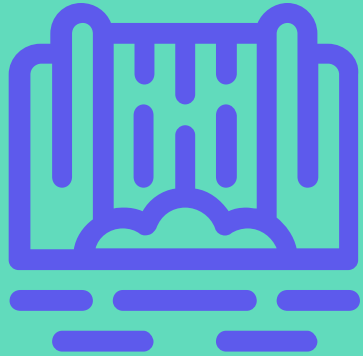


**USD 4.8  
MILLION**

Wow thats big number!

# Carbon Emission in Malaysia in 10 Years



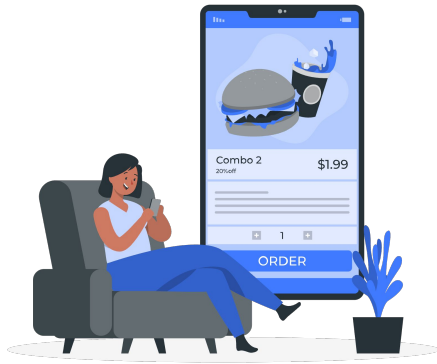


# 280 Million Tonne

You can feed a country with this much food.

# CARBON EMISSION IN FOOD DELIVERY INDUSTRY

## CUSTOMER BEHAVIOUR



## TRANSPORTATION EMISSION



## PACKAGING WASTE



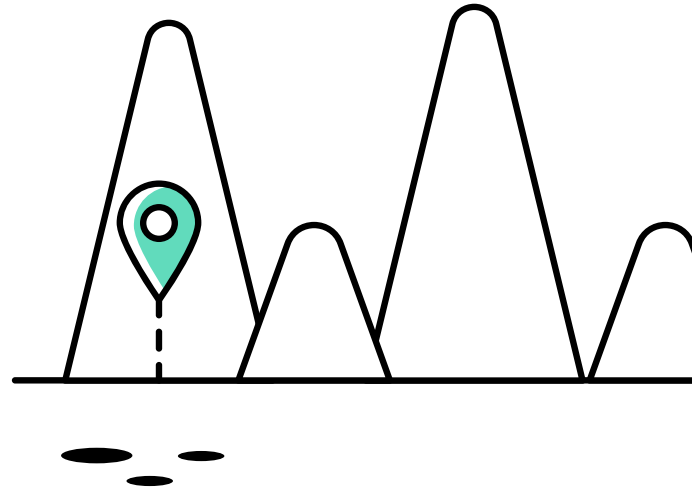
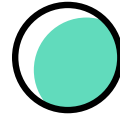
# OBJECTIVES

## OUR AIM

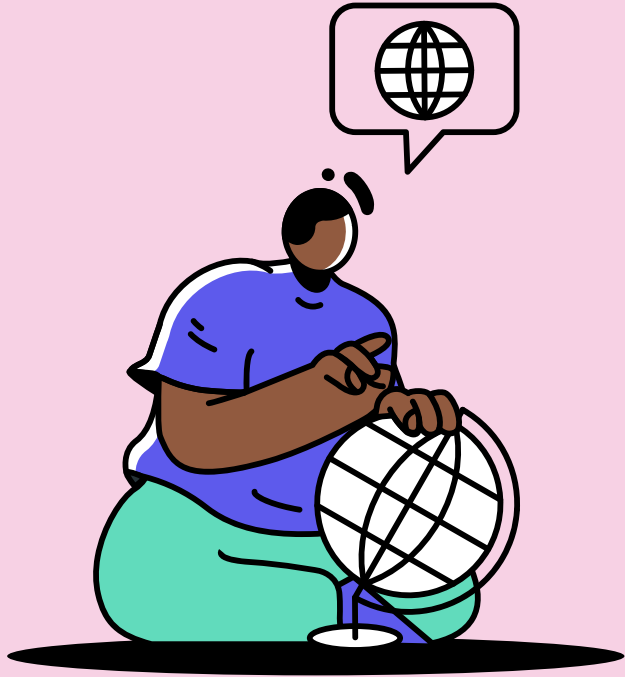
To reduce packaging waste and transportation emissions in food delivery services by **promoting sustainable consumer choices** and **eco-friendly logistics**

## THE GOAL

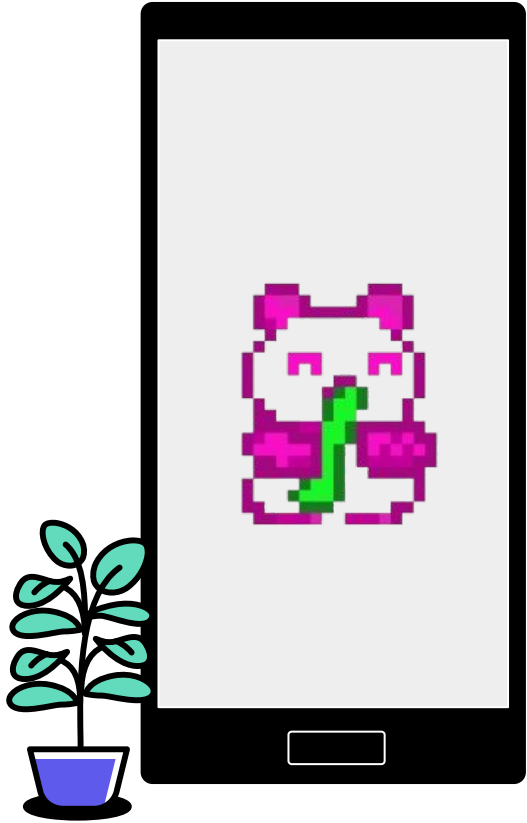
Encourage the adoption of **greener packaging** and prioritize delivery options using **electric vehicles**, ultimately **reducing the carbon footprint** of food delivery systems





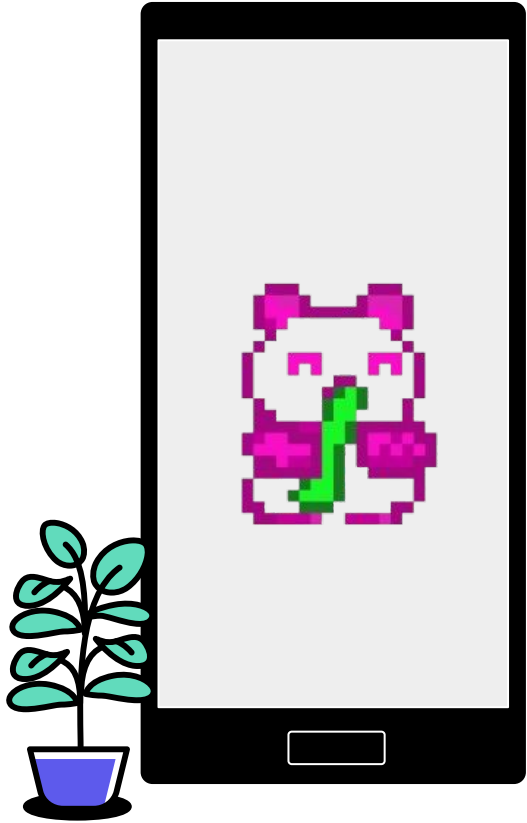


# **GAMIFYING \_INITIATIVES & INCENTIVES**



## **Poli**

Your virtual companion on a **greener journey**, one bamboo at a time.



**Encourage users to  
make eco-friendly  
choices**



Welcome to ABC



Nasi Lemak

RM 10

— 0 +



Satay

RM 5

— 0 +



Roti Canai

RM 2

### Delivery

Normal

Walker

E-bike

E-scooter

+ 1 points

### Time

Now

Schedule

+ 1 points

### Opt out

Cutlery

+ 1 points

2x Roti Canai RM 5.00

Delivery charge RM 5.00

**Total: RM 10.00**

Bamboo points 3 points

Checkout

miro



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## Statistic



Points

33

## Contribution



0.04%

Carbon footprint  
reduction



Schedule order



8

Eco ride



15

Vegan food



6

No cutlery



6



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## Leaderboard

End of season



Ranking

#1

5

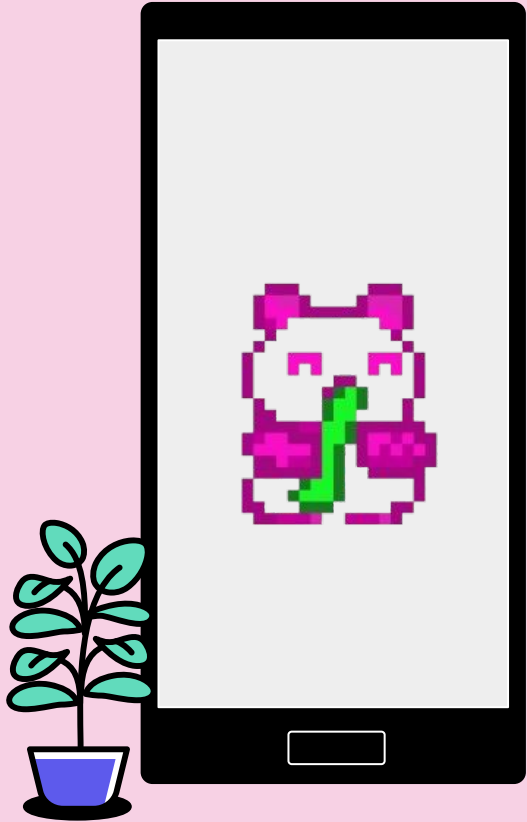
Reward



Points

33

Claim



## **Poli will also receive food to eat**

- As Poli eats, it will grow, “Level up” and can provide additional rewards.

Tier based rewards\*

## ECOFRIENDLY DELIVERY METHOD

- Incentives for EV Riders & Walkers
- More incentive if they receive eco-friendly orders



## ECOFRIENDLY PLASTIC BAG

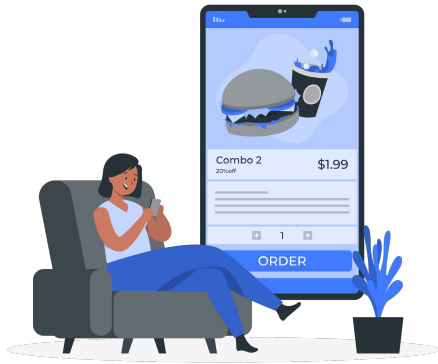
- Collaborate with and incentivize vendors to adopt FoodPanda's biodegradable plastic bags.
- Opportunity to make **more revenue**





# POSITIVE CHANGES WITH POLI

**Increase in Ecofriendly Preference**



**Increase Low-Emission Delivery**

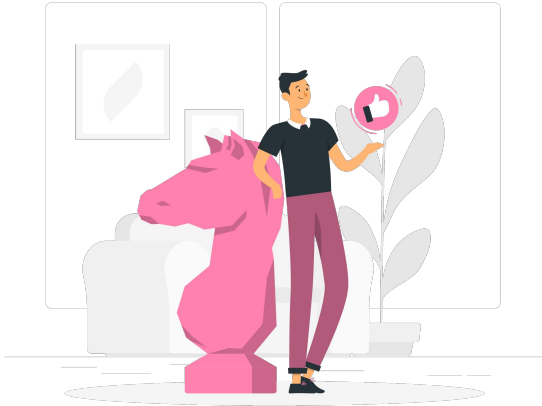


**Reduction of Longterm Waste**

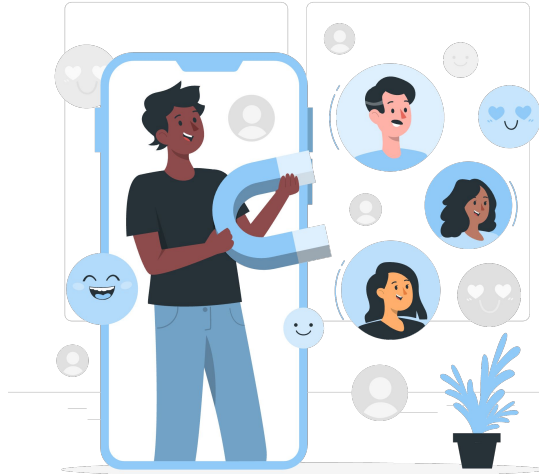


# POSITIVE EFFECT FOR FOOD PANDA

**Enhanced Brand Image**

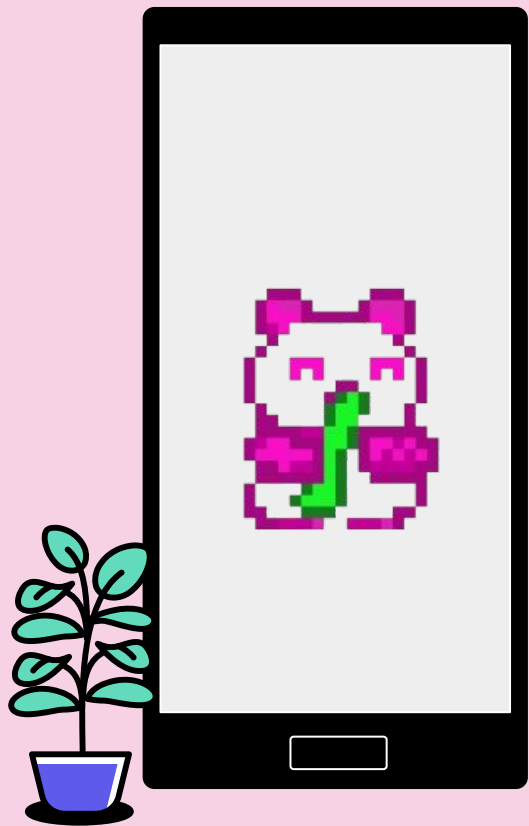


**Customer Loyalty**

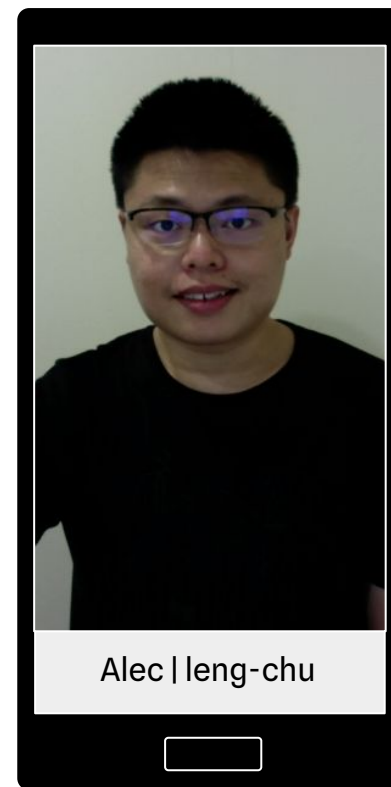
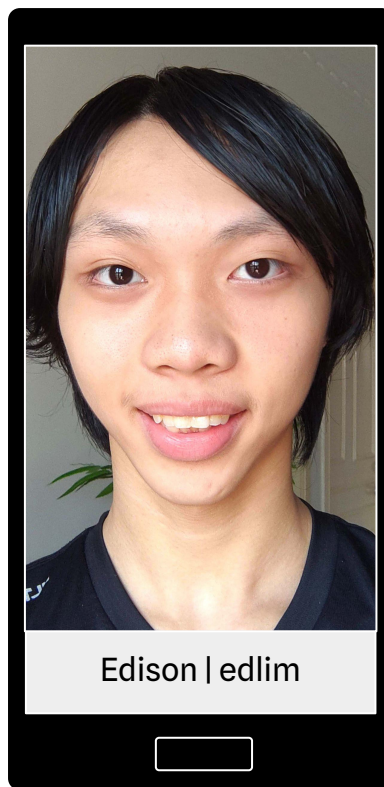


**Market  
Differentiation**





**DEMO SESSION**







Wan | sbin-jef



Shaun | Ikhye-ya

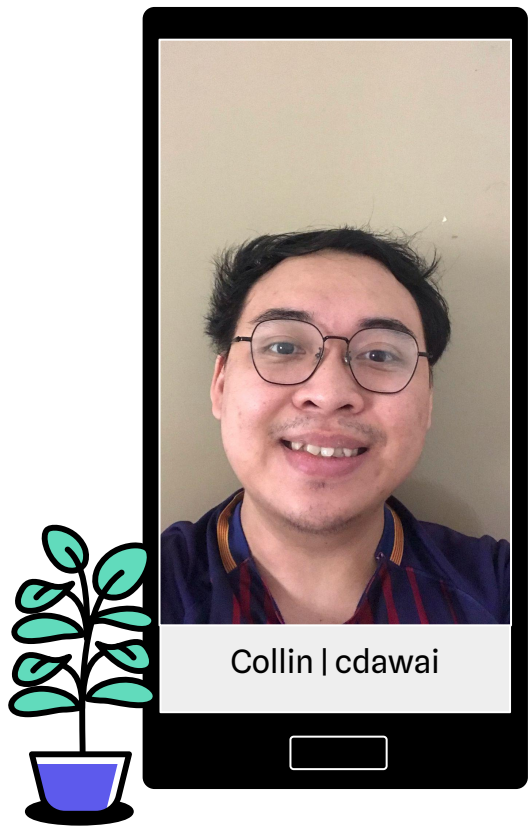


Lee Yang | ylee



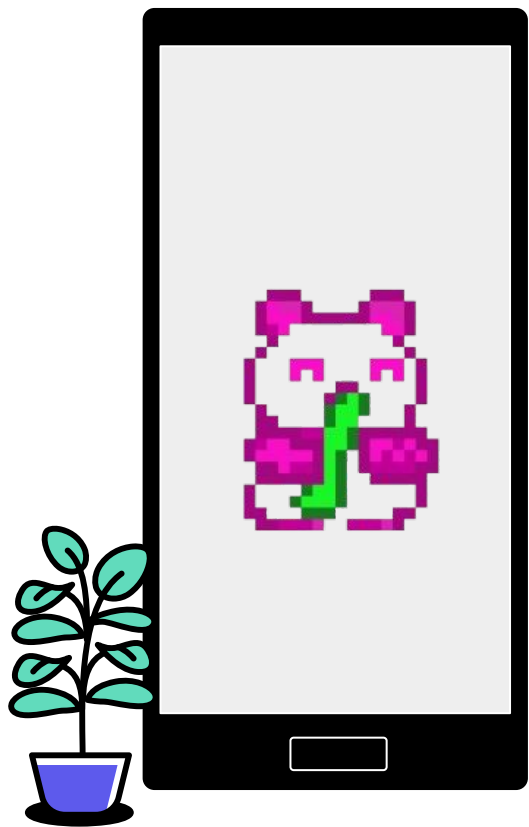
Bryan | brybenja





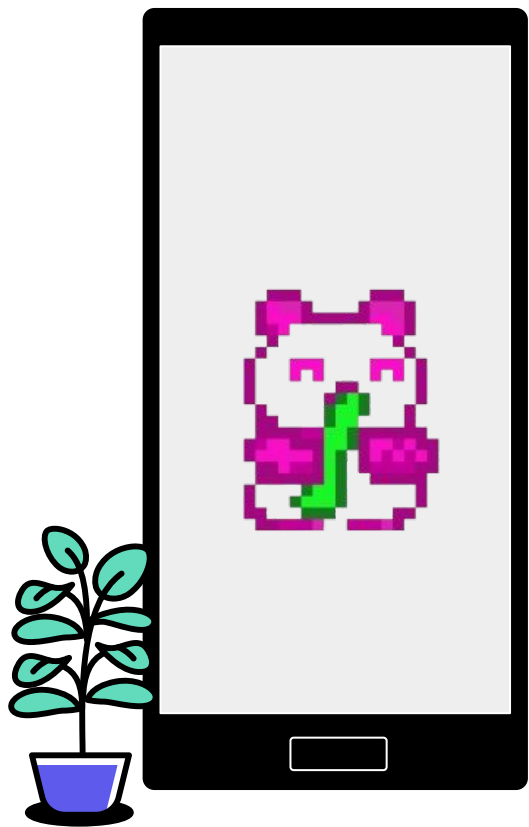
*"To be **Courageous** in making new changes"*

# **Thank You**

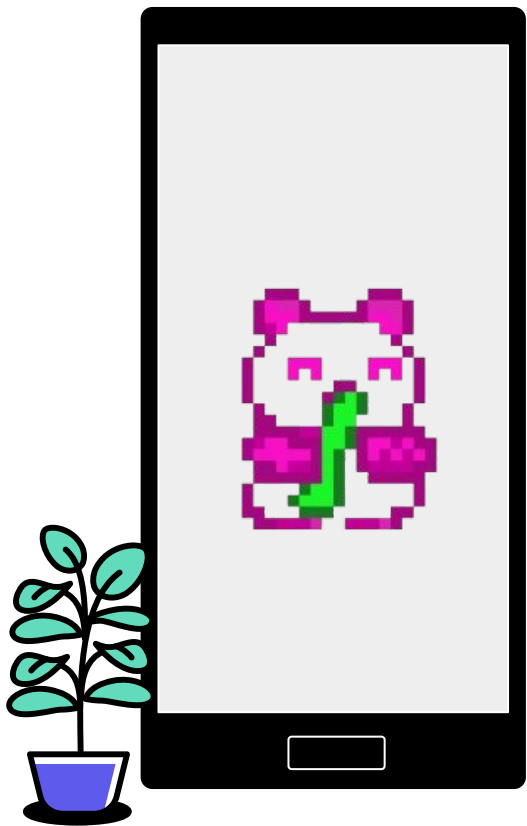


# Appendix





# Appendix



# TECH STACK

This application has 2 parts, the front-end webapp in /client, and backend server

Tech stack:

BE framework -django

db -sqlite3

FE framework -next.js + react.js

GameEngine -Gdevelop

GameGraphics -piskal

# Data on overall CO2 Emission



## Malaysia CO2 Emissions

Fossil CO2 Emissions (2022)

**277,531,770 tons**

Yearly  
Change

**+6.50%**

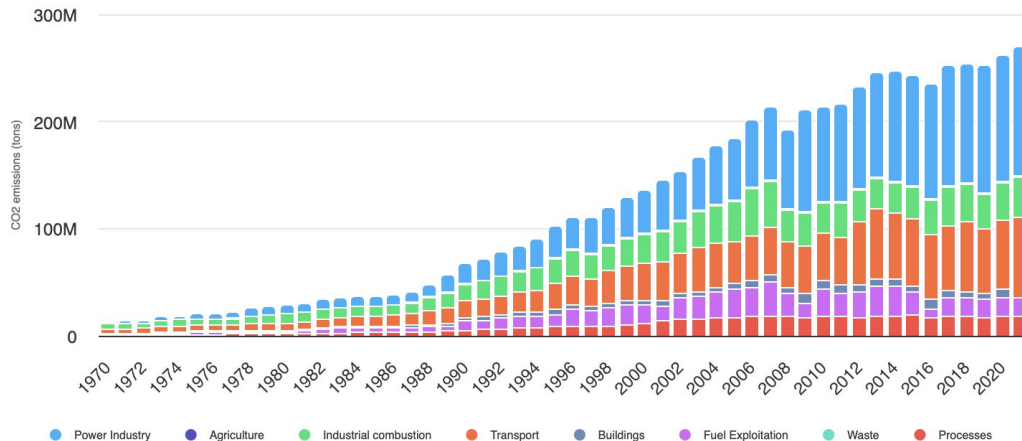
Global  
Share

**0.73%**

Tons per  
capita

**8.00**

Malaysia CO2 emissions by Year (tons)



<https://www.worldometers.info/co2-emissions/malaysia-co2-emissions/>  
#

# News on eMotorcycle Rebate

**THE RISE OF ELECTRIC BIKES PROMPTS SPECULATION ABOUT WHETHER THEY REPRESENT THE FUTURE OF TRANSPORTATION. THEIR INCREASING POPULARITY, COUPLED WITH ADVANCEMENTS IN BATTERY TECHNOLOGY AND INFRASTRUCTURE, SUGGESTS THAT E-BIKES COULD INDEED PLAY A SIGNIFICANT ROLE IN SHAPING THE FUTURE OF URBAN MOBILITY.**

By offering a sustainable alternative to traditional transportation methods and addressing concerns such as traffic congestion and air pollution, electric bikes have the potential to revolutionize urban commuting and recreational cycling alike.

Malaysia sees a rising trend in electric mobility, notably in the growing availability of electric motorcycles. The benefits of EV motorcycles are increasingly clear, aided by government support. In Budget 2024, an incentive scheme was launched to promote EV adoption. This signals a significant push towards a sustainable transportation scheme that offers the public a **substantial rebate of up to RM2,400** upon purchasing an electric motorcycle. Eligibility for this rebate extends to individuals earning less than RM120,000 annually or less than RM10,000 monthly.

<https://imotorbike.my/news/2024/05/revving-towards-the-future-malaysias-electric-motorcycle-movement/>

# Cost of eBikes

The average price for e-bikes in Malaysia can vary widely based on factors such as brand, specifications, and features. However, as of recent data:

Entry-Level E-Bikes: Typically range from RM 1,500 to RM 3,000.

Mid-Range E-Bikes: Generally priced between RM 3,000 to RM 6,000.

High-End E-Bikes: Can go from RM 6,000 to RM 10,000 or more, depending on advanced features and technology.

<https://www.usjcycles.com/bicycles-online/e-bikes/>

# Proposed calculation for plastic bag incentives

Assuming in Malaysia food panda takes 30%, food panda can take 20% instead and restaurant gets more.

EG: for RM 20 meal, Restaurant takes RM16 (80%) and Food Panda takes RM4 (20%); excluding delivery cost.

User opting for the plastic bag, food panda may charge RM 0.20 to RM0.50 as it cost about RM 0.15

# Ensuring restaurant uses the plastic bag

Since riders are required to take pictures as proof of pickup, rider can also verify that if vendor also used the provided plastic bag, in condition that users ordered the ecoplastic option. Vendors can be penalised for failing to do so.

Users could also verify upon receiving, therefore both vendor and driver are eligible for penalty

# **Making revenue from plastic bag ad**

Food panda can set a certain amount for other party to pay in order to advertise along side food panda for limited number of time

Since food panda have full control, they can experiment the best design to attract users and also create a seasonal festive design. They can also set a higher price during these festive seasons.



# Target Audience

Environmentally conscious users:

- Wary of how they spend & what they do and contribute.

Competitive users:

- Have excess money and is willing to spend and wants to get more point for the sake of “green” accomplishment.

Interested but unsure

- May be interested but unsure where to start.
- Interested and willing to commit but does not have the resources or time to contribute to lesser carbon due to a busy life style

# What can the bamboo point be redeemed for?

For users:

- Redeem more voucher
- Redeem eco friendly product (eg Limited edition reusable food containers)
- Convert bamboo to original panda point (but not panda point to bamboo)

For deliverers (eRiders & walkers):

- Sport Shoe discounts/vouchers
- Vouchers for EV charging

# **A way to compliment, not replace, Food Panda's reward system**

While current reward system can exist and still function as usual, bamboo point will specifically focus and be rewarded for eco friendlier options.

In fact, bamboo point can encourage environmentally conscious & competitive users to buy subscription where it provide benefits like:

- Cheaper cost of eco plastic
- Increased amount of bamboo received (1.5x)
- Panda grow faster

# Comparison of Gasoline Vehicle vs EV

## Lifetime Emissions

- **ICEVs:** Over their entire lifecycle, ICEVs typically have higher emissions due to continuous fuel combustion.
- **EVs:** Despite higher initial emissions from production, EVs generally have lower lifetime emissions. Studies show that EVs contribute fewer GHG emissions over their entire lifecycle compared to gasoline-powered cars<sup>2</sup>.

## Air Quality and Health

- **ICEVs:** Emit pollutants that contribute to smog and respiratory problems.
- **EVs:** Help improve air quality by eliminating tailpipe emissions, which is particularly beneficial in urban areas.

## Energy Efficiency

- **ICEVs:** Less efficient, with a significant amount of energy lost as heat.
- **EVs:** More efficient, converting a higher percentage of energy from the battery to power the vehicle.

# Comparison of Gasoline Vehicle vs EV

## Production Phase

- **ICEVs:** Manufacturing traditional vehicles involves emissions from producing steel, aluminum, and other materials. However, the production process is generally less carbon-intensive than that of EVs.
- **EVs:** The production of EVs, particularly their batteries, is more carbon-intensive due to the extraction and processing of materials like lithium, cobalt, and nickel. This can result in up to 80% more emissions during manufacturing compared to ICEVs<sup>1</sup>.

## Operational Phase

- **ICEVs:** These vehicles emit greenhouse gases (GHGs) directly from their tailpipes, including carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and particulate matter (PM). The average gasoline car emits more than 350 grams of CO<sub>2</sub> per mile driven<sup>1</sup>.
- **EVs:** EVs produce no tailpipe emissions. However, the emissions associated with charging them depend on the energy mix of the electricity grid. In regions with a high share of renewable energy, EVs have a much lower carbon footprint. On average, EVs emit about 200 grams of CO<sub>2</sub> per mile driven, considering the current energy mix<sup>1</sup>.

<https://www.helipro.com.my/biodegradable-plastic-bag/>

<https://www.epa.gov/greenvehicles/comparison-your-car-vs-electric-vehicle>